

**WHAT IS CLAIMED IS**

1. A wireless transmission apparatus, comprising:
  - a wired network port for exchanging data with a computer;
  - a wireless network port including a radio frequency circuit module;
  - 5 a processing unit for converting the data format transmitted between the wired network port and the wireless network port; and
  - a power port electrically connected to a universal series bus of the computer, by which the wireless transmission apparatus is powered.
- 10 2. The wireless transmission apparatus of Claim 1, further comprising a power controller electrically connected to the power port, wherein the power controller comprises:
  - a voltage transformer adapted to convert a voltage of the power port to a voltage suitable for the operation of the wireless transmission apparatus; and
  - 15 a power-saving controller adapted to suspend the power supply to the radio frequency circuit module according to a power control signal generated by the processing unit.
3. The wireless transmission apparatus of Claim 1, wherein the power port is a universal series bus port.
- 20 4. The wireless transmission apparatus of Claim 1, further comprising a universal series bus wire connected to the power port.
5. The wireless transmission apparatus of Claim 1, wherein the wired network port uses a communication protocol, which complies with the IEEE 802.3 standard.
- 25 6. The wireless transmission apparatus of Claim 1, further

comprising a memory for storing data transmitted between the wired network port and the wireless network port.

7. The wireless transmission apparatus of Claim 6, further comprising a memory controller for controlling the data access of the  
5 memory.